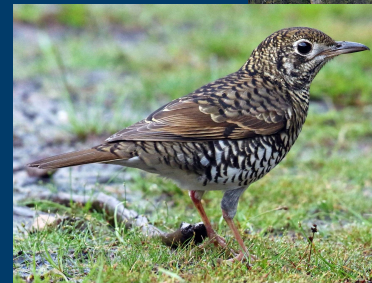


Mount Bold Dam Safety Upgrade

Flora and Fauna Assessments

Thursday 30 July 2020



Government of
South Australia



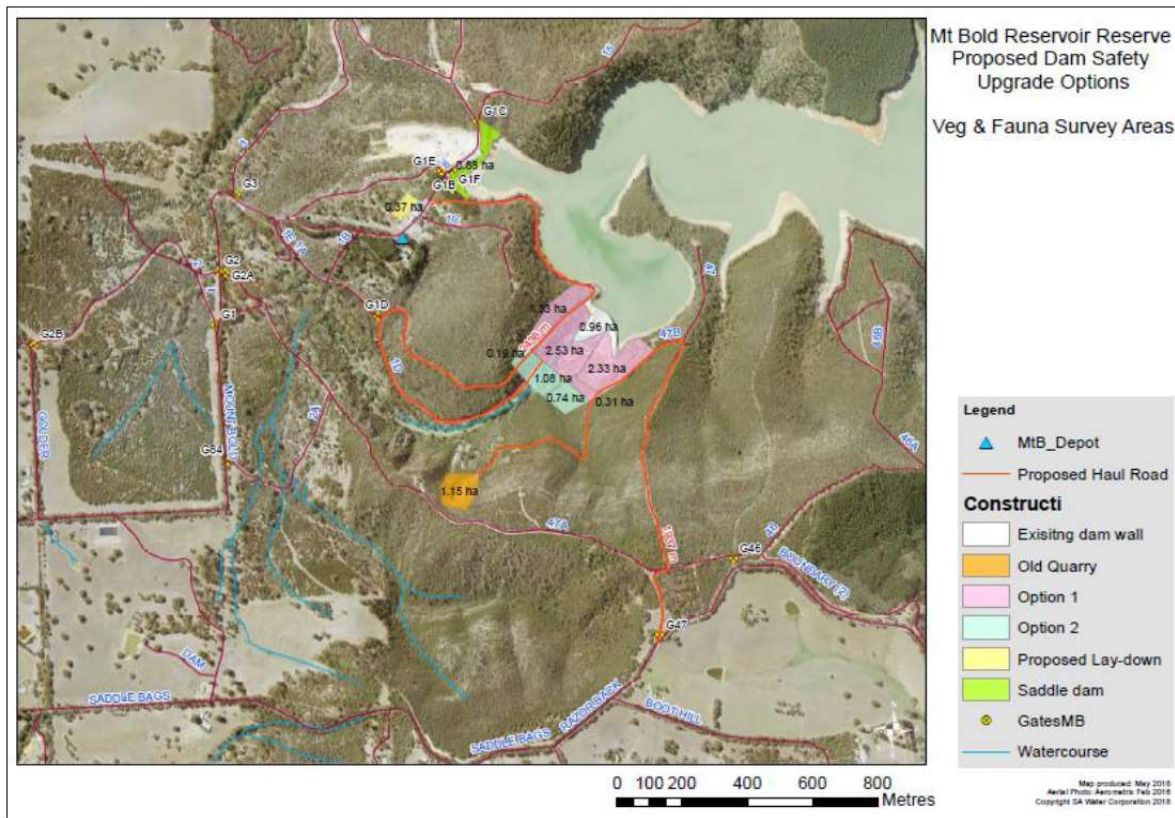
Overview

- Background flora and fauna assessments undertaken, including:
 - i. Areas and locations assessed
 - ii. Identified flora and fauna of state and national conservation significance
- Environmental approvals
- Minimising environmental impacts
- Significant Environmental Benefit (SEB) offsets
- Questions

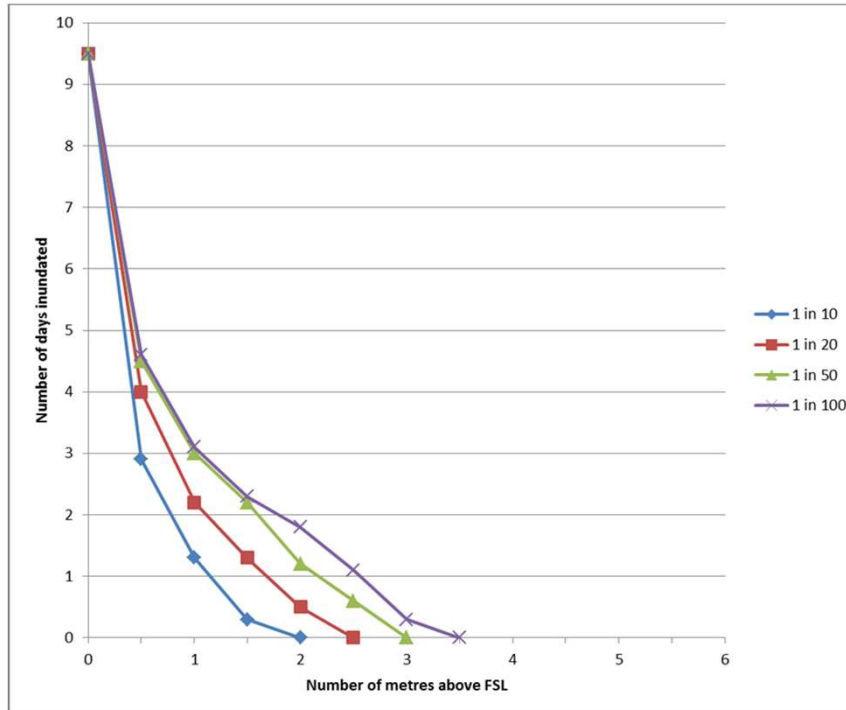
Background

- Initial flora and fauna assessments were undertaken in 2018 and 2019 over a period of 12 months
- Areas assessed were based on early concept designs around the dam upgrade footprint and construction access
- Flora assessment and field surveys were undertaken of native vegetation communities and identified species of conservation significance
- Fauna assessments focussed on identifying species of conservation significance using:
 - i. Establishment of sensor cameras at fauna survey locations
 - ii. Cage trapping
 - iii. Regular field surveys to monitor traps and record observations
- Additional baseline native vegetation assessments also undertaken for the additional flood mitigation design option

Areas assessed from early concept design



Flood inundation (upstream)



1: 18 AEP based on FSL (current design option)



Flora of conservation significance

- No Environment Protection and Biodiversity Conservation (EPBC) Act listed flora species or communities identified
- Eight state listed species were recorded:
 1. *Cardamine paucijuga* (Annual bittercress) - rare
 - Eucalyptus fasciculosa* (Pink gum) - rare
 2. *Eucalyptus viminalis* (Manna gum) - rare
 3. *Logania saxitilis* (Rock logania) - rare
 4. *Juncus amabilis* – vulnerable
 5. *Spyridium spathulatum* (Spoon leaf spyridium) – rare
 6. *Stellaria palustris* var. *tenella* (Swamp Starwort) – rare
 7. *Thelymitra grandiflora* (Great sun orchid) - rare



Great sun orchid

Flora of conservation significance

- Two vulnerable provisionally state listed vegetation communities present:
 1. *Eucalyptus fasciculosa* +/- *E. leucoxylon* Heathy Woodland on sandy loams of flats and slopes
 2. *Eucalyptus. viminalis* ssp. *viminalis* Woodland on alluvial soils in moist areas



Eucalyptus camaldulensis, *E. viminalis* ssp. *viminalis* woodland

Fauna of conservation significance (national)

- EPBC Act listed species identified:
 - 1) *Calamanthus pyrrhopygius parkeri* (Chestnut-Rumped Heathren) – listed as endangered
 - 2) *Zoothera lunulata halmaturina* (Bassian Thrush) – listed as vulnerable
 - 3) *Isodon obesulus obesulus* (Southern Brown Bandicoot) – listed as endangered and known to live in the area – however not recorded during surveys



Bassian thrush



Chestnut-Rumped Heathwren

Fauna of conservation significance (state)

State listed species identified:

- 1) *Calyptorhynchus funereus* (Yellow-Tailed Black Cockatoo) –vulnerable
- 2) *Falco peregrinus* (Peregrine Falcon) – rare
- 3) *Melithreptus gularis gularis* (Black-chinned Honeyeater) – vulnerable
- 4) *Petroica boodang boodang* (Scarlet Robin) – rare
- 5) *Antechinus flavipes* (Yellow-Footed Antechinus) – rare
- 6) *Trichosurus vulpecula* (Common Brushtail Possum) – rare
- 7) *Egernia cunninghami* (Cunningham Skink) – endangered
- 8) *Pseudophryne bibronii* (Bibron's Toadlet) – rare



Yellow-Footed Antechinus



Cunningham Skink

Environmental approvals

- Additional flora assessments planned in spring 2020 to support preferred construction access and laydown areas as they progress
- Flora and fauna experts are being engaged as part of technical assessments:
 - i. to review desktop listings and previous records of threatened species and undertake a risk assessment and inform further survey work
 - ii. to assess potential impacts for EPBC listed species to advise if a referral is required
- Native Vegetation Council (NVC) approval will be required for the project and proposal for Significant Environmental Benefit (SEB) offsets

Strategies to minimise impact

- We will assess and balance the environmental, cost and constructability requirements as part of project planning
- Upgrading the existing dam wall has fewer impacts than constructing a new dam wall
- Eliminated previous option of on-site quarry
- We will upgrade and widen pre-existing tracks for construction access to utilise existing footprint
- Prioritise laydown and construction compound areas in already cleared or more degraded locations where possible
- A specific Construction Environmental Management Plan (CEMP) will be developed, approved and monitored closer towards construction



Significant Environmental Benefit (SEB) offsets

- SEB offset proposal will be developed to support the NVC application
- The project is exploring additional land for revegetation
- SEB aims to build on existing remnants and revegetate pre-European native plant associations



Proposed ecological restoration/revegetation sites

Example of SEB offset – Millbrook



Millbrook SEB Site – before 2017 (former Forestry SA pine plantation)



Millbrook SEB site after – early 2020

Questions



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